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*** DIALINDEX search results display in an abbreviated ***
*** format unless you enter the SET DETAIL ON command. ***
?sf allscience
   You have 287 files in your file list.
   (To see banners, use SHOW FILES command)
?s polyhistid? (3n) triad?

Your SELECT statement is:
   s polyhistid? (3n) triad?

          Items   File
          -----   ----
       Examined  50 files
       Examined 100 files
              1   340: CLAIMS(R)/US Patent_1950-04/Sep 23
       Examined 150 files
              6   349: PCT FULLTEXT_1979-2002/UB=20040923,UT=20040916
       Examined 200 files
              1   654: US Pat.Full._1976-2004/Sep 23
       Examined 250 files

   3 files have one or more items; file list includes 287 files.

?save temp
Temp SearchSave "TD861" stored
?rf
Your last SELECT statement was:
   S POLYHISTID? (3N) TRIAD?

Ref         Items   File
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N1              6   349: PCT FULLTEXT_1979-2002/UB=20040923,UT=20040916
N2              1   340: CLAIMS(R)/US Patent_1950-04/Sep 23
N3              1   654: US Pat.Full._1976-2004/Sep 23
N4              0     2: INSPEC_1969-2004/Sep W3
N5              0     5: Biosis Previews(R)_1969-2004/Sep W3
N6              0     6: NTIS_1964-2004/Sep W3
N7              0     8: Ei Compendex(R)_1970-2004/Sep W3
N8              0     9: Business & Industry(R)_Jul/1994-2004/Sep 24
N9              0    10: AGRICOLA_70-2004/Aug
N10             0    15: ABI/Inform(R)_1971-2004/Sep 27
   3 files have one or more items; file list includes 287 files.

        - Enter P or PAGE for more -
?b n1 n2 n3;exs
       27sep04 14:09:26 User228206 Session D2243.4
            $3.62    1.610 DialUnits File411
     $3.62  Estimated cost File411
     $0.50  TELNET
     $4.12  Estimated cost this search
    $12.64  Estimated total session cost   3.322 DialUnits


SYSTEM:OS  - DIALOG OneSearch
  File 349:PCT FULLTEXT 1979-2002/UB=20040923,UT=20040916
         (c) 2004 WIPO/Univentio
  File 340:CLAIMS(R)/US Patent 1950-04/Sep 23
         (c) 2004 IFI/CLAIMS(R)
*File 340: For information about the annual reload, see HELP NEWS 340.
  File 654:US Pat.Full. 1976-2004/Sep 23
         (c) Format only 2004 The Dialog Corp.

      Set  Items  Description
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>>>Duplicate detection is not supported for File 340.
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S1          8   POLYHISTID? (3N) TRIAD?
?t s1/3,kwic/all

 1/3,KWIC/1     (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

01077701
VACCINE COMPRISING MIXTURES OF MULTIVALENT MENINGOCOCCAL OUTER MEMBRANE
    VESCILES
COMPOSITIONS DE VACCINS
Patent Applicant/Assignee:
  GLAXOSMITHKLINE BIOLOGICALS S A, Rue de L'Institut 89, B-1330 Rixensart,
    BE, BE (Residence), BE (Nationality), (For all designated states
    except: US)
  INSTITUTO FINLAY, Centro de Investigacion-Produccion de Sueros y Vacunas,
    Ave 27 No. 19805, La Coronela, La Lisa Ciudad de la Habana, CU, CU
    (Residence), CU (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
  BARBERA MORALES Ramon Faustino, Finlay Institute, Ave 27 No. 19805, La
    Coronela, La Lisa Ciudad de la Habana, CU, CU (Residence), CU
    (Nationality), (Designated only for: US)
  DESMONS Pierre Michel, GlaxoSmithKline Biologicals s.a., Rue de
    l'Institut 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality),
    (Designated only for: US)
  DOMINGUEZ ALVAREZ Francisco Jesus, Finlay Institute, Ave 27 No. 19805, La
    Coronela, La Lisa Ciudad de la Habana, CU, CU (Residence), CU
    (Nationality), (Designated only for: US)
  POOLMAN Jan, GlaxoSmithKline Biologicals s.a, Rue de L'Institut 89,
    B-1330 Rixensart, BE, BE (Residence), NL (Nationality), (Designated
    only for: US)
Legal Representative:
  LUBIENSKI Michael John (agent), GlaxoSmithKline, 980 Great West Road,
    Brentford, Middlesex TW8 9GS, GB,
Patent and Priority Information (Country, Number, Date):
  Patent:               WO 2003105890 A2-A3 20031224 (WO 03105890)
  Application:          WO 2003EP6094 20030610  (PCT/WO EP03006094)
  Priority Application: GB 200213622 20020613
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG
  SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
  SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 9781

Fulltext Availability:
  Detailed Description
```

Detailed Description
... of the invention is preferably selected from the group consisting of. a protein from the **polyhistidine triad** family (Pht), a protein from the Lyt family, a choline binding protein, proteins having an...

...and is also referred to Sp36. As noted above, it is a protein from the **polyhistidine triad** family and has the type rf signal motif of LXXC.

PhtD is disclosed in WO...

...is also referred to Sp036D. As noted above, it also is a protein from the **polyhistidine triad** family and has the type II LXXC signal motif.

PhtB is disclosed in WO 00...
...O-Degrading Polypeptide, as disclosed in WO 00/17370. This protein also is from the **polyhistidine triad** family and has the type 11 LXXC signal motif. A preferred immunologically fimetional equivalent is...

1/3,KWIC/2 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01023161
STREPTOCOCCUS PNEUMONIAE VACCINE
VACCIN
Patent Applicant/Assignee:
GLAXOSMITHKLINE BIOLOGICALS S A, 89, rue de I'Institut, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
LAFERRIERE Craig Anthony Joseph, GlaxoSmithKline, 2030 Bristol Circle, Oakville, Ontario L6H 5V2, CA, CA (Residence), CA (Nationality), (Designated only for: US)
POOLMAN Jan, GlaxoSmithKline Biologicals, 89, rue de I'Institut, B-1330 Rixensart, BE, BE (Residence), NL (Nationality), (Designated only for: US)
Legal Representative:
EASEMAN Richard Lewis (agent), GlaxoSmithKline, 980 Great West Road, Brentford, Middlesex TW8 9GS, GB,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200351392 A2-A3 20030626 (WO 0351392)
Application: WO 2002EP14476 20021218 (PCT/WO EP0214476)
Priority Application: GB 200130215 20011218
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SI SK TR
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(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 10447

Fulltext Availability:
Detailed Description

Detailed Description
... II Signal sequence motif of LXXC (where X is any amino acid, e.g., the **polyhistidine triad** family (PhtX)), choline binding proteins (CbpX), proteins having a Type I Signal sequence ...and is also referred to

Sp36. As noted above, it is a protein from the **polyhistidine triad** family and has the type 11 signal motif of LXXC. ...is also referred to SpO36D. As noted above, it also is a protein from the **polyhistidine triad** family and has the type 11 LXXC signal motif. PhtB is disclosed in WO 00...

...O-Degrading Polypeptide, as disclosed in WO 00/17370. This protein also is from the **polyhistidine triad** family and has the type 11 LXXC signal motif. A preferred immunologically functional equivalent is...

1/3,KWIC/3 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01000697
VACCINE
VACCIN
Patent Applicant/Assignee:
GLAXOSMITHKLINE BIOLOGICALS S A, rue de l'Institut, 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
GARCON Nathalie, GlaxoSmithKline Beecham Biologicals, Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), FR (Nationality), (Designated only for: US)
Legal Representative:
EASEMAN Richard Lewis (agent), GlaxoSmithKline, Corporate Intellectual Property CN925.1, 980 Great West Road, Brentford, Middlesex TW8 9GS, GB
,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200328760 A2-A3 20030410 (WO 0328760)
Application: WO 2002EP10931 20020930 (PCT/WO EP02010931)
Priority Application: GB 200123580 20011001
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 7030

Fulltext Availability:
Detailed Description

Detailed Description
... and is also referred to Sp36. As noted above, it is a protein from the **polyhistidine triad** family and has the type II signal motif of LXXC.

PhtD is disclosed in WO ...is also referred to SpO36D. As noted above, it also is a protein from the **polyhistidine triad** family and has the type 11 LXXC
signal motif
PhtB is disclosed in WO 00...

...C3-Degrading Polypeptide, as disclosed in WO 00/17370. This protein also is from the **polyhistidine triad** family and has the type 11 LY,XC signal motif A preferred immunologically f@nctional...

1/3,KWIC/4 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00898095
YERSINIA ADHESION PROTEIN AS VACCINE ADJUVANT COMPOSITION
Patent Applicant/Assignee:
SMITHKLINE BEECHAM BIOLOGICALS S A, Rue de l'institut 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
HERMAND Philippe, GlaxoSmithKline Biologicals, Rue de l'institut 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (Designated only for: US)
VANDE VELDE Vincent, GlaxoSmithKline Biologicals, Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (Designated only for: US)
Legal Representative:
DALTON Marcus Jonathan William (agent), SmithKline Beecham, Corporate Intellectual Property (CN9.25.1), 980 Great West Road, Brentford, Middlesex TW8 9GS, GB,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200230458 A1 20020418 (WO 0230458)
Application: WO 2001EP3786 20010326 (PCT/WO EP0103786)
Priority Application: GB 200025058 20001012
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 12713

Fulltext Availability:
Detailed Description

Detailed Description
... of the invention is preferably selected from the group consisting of: a protein from the **polyhistidine triad** family (Pht), a choline binding protein, proteins having an LPXTG motif (where X is any...in WO 98/18930, and is also called Sp36. It is a protein from the **polyhistidine triad** family and has the type H signal motif of LXXC; PhtD is disclosed in WO 00/37105, and is also called SpO36D. It also is a protein from the **polyhistidine triad** family and has the type II LX-XC signal motif; PhtB is disclosed in WO...

...O-Degrading Polypeptide, as disclosed in WO 00/17370. This protein also is from the **polyhistidine triad** family and has the type II LXXC signal motif. A preferred immunologically functional equivalent is...

1/3,KWIC/5 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00889858
VACCINE AGAINST STREPTOCOCCUS PNEUMONIAE VACCIN
Patent Applicant/Assignee:

SMITHKLINE BEECHAM BIOLOGICALS SA, Rue de l'Institut 89, B-1330 Rixensart , BE, BE (Residence), BE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
HERMAND Philippe, GlaxoSmithKline Biologicals, Rue de l'institut 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (Designated only for: US)
LAFERRIERE Craig Antony Joseph, SmithKline Beecham Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), CA (Nationality), (Designated only for: US)
LOBET Yves, GlaxoSmithKline Beecham Biologicals, Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (Designated only for: US)
POOLMAN Jan, GlaxoSmithKline Biologicals SA, Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), NL (Nationality), (Designated only for: US)
Legal Representative:
LUBIENSKI Michael John (agent), GlaxoSmithKline Beecham, Corporate Intellectual Property (CN9.25.1), 980 Great West Road, Brentford, Middlesex TW8 9GS, GB,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200222168 A2-A3 20020321 (WO 0222168)
Application: WO 2001EP10570 20010912 (PCT/WO EP0110570)
Priority Application: GB 200022742 20000915
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
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EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK
SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 8172
Fulltext Availability:
Detailed Description
Claims

Detailed Description
... Signal sequence motif of LXXC (where X is any arnino acid, e.g., 3
the **polyhistidine triad** family (PhtX)), choline binding proteins (CbpX), proteins having a Type I Signal sequence motif (e...and is also referred to Sp36. As noted above, it is a protein from the **polyhistidine triad** family and has the type II signal motif of LXXC.

PhtD is disclosed in WO...

...is also referred to SP036D. As noted above, it also is a protein from the **polyhistidine triad** family and has the type II LXXC signal motif.

PhtB is disclosed in WO 00...

...O-Degrading Polypeptide, as disclosed in WO 00/17370. This protein also is from the **polyhistidine triad** family and has the type II I 0 LXXC signal motif. A preferred immunologically functional...

Claim
... Sp125 and SpI33.

2 The immunogenic composition of claim I comprising a protein from the **polyhistidine triad** family (PhtX) and another protein selected from the group 1 0 consisting of Choline Binding...

...CbpX truncate-LytX truncate chimeric proteins and another protein selected from the group consisting of **polyhistidine triad** family (PhtX), LytX family, pneumolysin (Ply), PspA, PsaA, SpI28, SplOl, SpI30, SpI25 and Sp133.

4...

1/3,KWIC/6 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00889857
VACCINE AGAINST STREPTOCOCCUS PENUMONIAE
VACCIN
Patent Applicant/Assignee:
SMITHKLINE BEECHAM BIOLOGICALS S A, Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), BE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
LAFERRIERE Craig Antony Joseph, GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), CA (Nationality), (Designated only for: US)
POOLMAN Jan, GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart, BE, BE (Residence), NL (Nationality), (Designated only for: US)
Legal Representative:
LUBIENSKI Michael John (agent), GlaxoSmithKline, Corporate Intellectual Property (CN9.25.1), 980 Great West Road, Brentford, Middlesex TW8 9GX, GB,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200222167 A2-A3 20020321 (WO 0222167)
Application: WO 2001EP10568 20010912 (PCT/WO EP0110568)
Priority Application: GB 200022742 20000915
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
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(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 12835

Fulltext Availability:
Detailed Description

Detailed Description
... of the invention is preferably selected from the group consisting of. a protein from the **polyhistidine triad** family (Pht), a protein from the Lyt family, a choline binding protein, proteins having an...

...and is also referred to Sp36. As noted above, it is a protein from the **polyhistidine triad** family and has the type II signal motif of LXXC.

PhtD is disclosed in WO...

...is also referred to SP036D. As noted above, it also is a protein from the **polyhistidine triad** family and has the type II LXXC signal motif.

PhtB, is disclosed in WO 00...

...O-Degrading Polypeptide, as disclosed in WO 00/17370. This protein also is from the **polyhistidine triad** family and has the type II LXXC signal motif A preferred inu-nunologically functional equivalent...II Signal sequence motif of LXXC (where X is any amino acid, e.g., the **polyhistidine triad** family (Pht)), choline binding proteins (Cbp), proteins having a Type I Signal sequence motif (e...

1/3,KWIC/7 (Item 1 from file: 340)
DIALOG(R)File 340:CLAIMS(R)/US Patent

10574440 2004-0081662 2004-0023517
C/VACCINE
Inventors: Hermand Philippe (BE); Laferriere Craig A J (BE); Lobet Yves (BE); Poolman Jan (BE)
Assignee: Unassigned Or Assigned To Individual
Assignee Code: 68000

	Publication Kind	Publication Number	Publication Date	Application Number	Application Date
	A1	US 20040081662	20040429	US 2003380563	20031008
PCT:				WO 01EP10570	20010912
				Section 371:	20031008
				Section 102(e):	20031008
Priority Applic:				GB 2000227421	20000915

Exemplary Claim: ...at least 2 S. pnumoniae proteins wherein one of the proteins is selected from the **polyhistidine triad** family (PhtX) and another protein is selected from the group consisting of Choline Binding Protein...
Non-exemplary Claims: ...CbpX truncate-LytX truncate chimeric proteins and another protein selected from the group consisting of **polyhistidine triad** family (PhtX), LytC, pneumolysin (Ply), PsaA, and Sp128...

1/3,KWIC/8 (Item 1 from file: 654)
DIALOG(R)File 654:US Pat.Full.

0005628061 **IMAGE Available
Derwent Accession: 2002-351845
Vaccine
Inventor: Hermand, Philippe, INV
Laferriere, Craig, INV
Lobet, Yves, INV
Poolman, Jan, INV
Correspondence Address: SMITHKLINE BEECHAM CORPORATION CORPORATE INTELLECTUAL PROPERTY-US, UW2220, P. O. BOX 1539, KING OF PRUSSIA, PA, 19406-0939, US

	Publication Number	Kind	Publication Date	Application Number	Filing Date
Main Patent	US 20040081662	A1	20040429	US 2003380563	20031008
PCT				WO 2001EP10570	20010912
Priority				GB 2000227421	20000915

Fulltext Word Count: 8703
Summary of the Invention:
...II Signal sequence motif of LXXC (where X is any amino acid, e.g., the **polyhistidine triad** family (phtX)), choline binding proteins (CbpX), proteins having a Type I Signal sequence motif (e...and is also

referred to Sp36. As noted above, it is a protein from the **polyhistidine triad** family and has the type II signal motif of LXXC...

...is also referred to Sp036D. As noted above, it also is a protein from the **polyhistidine triad** family and has the type I LXXC signal motif ...C3-Degrading Polypeptide, as disclosed in WO 00/17370. This protein also is from the **polyhistidine triad** family and has the type II LXXC signal motif. A preferred immunologically functional equivalent is...

Exemplary or Independent Claim(s):
...at least 2 S. pnumoniae proteins wherein one of the proteins is selected from the **polyhistidine triad** family (PhtX) and another protein is selected from the group consisting of Choline Binding Protein...

...CbpX truncate-LytX truncate chimeric proteins and another protein selected from the group consisting of **polyhistidine triad** family (PhtX), LytC, pneumolysin (Ply), PsaA, and Sp128...
?logoff hold

SYSTEM:OS - DIALOG OneSearch
File 155:MEDLINE(R) 1951-2004/Sep W3
(c) format only 2004 The Dialog Corp.
*File 155: Medline has been reloaded. Accession numbers
have changed. Please see HELP NEWS 154 for details.
File 5:Biosis Previews(R) 1969-2004/Sep W3
(c) 2004 BIOSIS
File 73:EMBASE 1974-2004/Sep W3
(c) 2004 Elsevier Science B.V.
File 654:US Pat.Full. 1976-2004/Sep 23
(c) Format only 2004 The Dialog Corp.
File 349:PCT FULLTEXT 1979-2002/UB=20040923,UT=20040916
(c) 2004 WIPO/Univentio
File 144:Pascal 1973-2004/Sep W3
(c) 2004 INIST/CNRS
File 444:New England Journal of Med. 1985-2004/Sep W3
(c) 2004 Mass. Med. Soc.
File 286:Biotechnology Directory Current Jul B2
(c) 2004 BioCommerce Data Ltd.
*File 286: Name and updating change Aug 2004
Enter HELP NEWS286 for more
File 65:Inside Conferences 1993-2004/Sep W4
(c) 2004 BLDSC all rts. reserv.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current
information.
File 342:Derwent Patents Citation Indx 1978-04/200458
(c) 2004 Thomson Derwent
File 94:JICST-EPlus 1985-2004/Aug W5
(c)2004 Japan Science and Tech Corp(JST)
File 10:AGRICOLA 70-2004/Aug
(c) format only 2004 The Dialog Corporation
File 148:Gale Group Trade & Industry DB 1976-2004/Sep 27
(c)2004 The Gale Group
*File 148: Alert feature enhanced for multiple files, duplicate
removal, customized scheduling. See HELP ALERT.
File 340:CLAIMS(R)/US Patent 1950-04/Sep 23
(c) 2004 IFI/CLAIMS(R)
*File 340: For information about the annual reload, see HELP NEWS 340.
File 357:Derwent Biotech Res. _1982-2004/Sep W4
(c) 2004 Thomson Derwent & ISI
File 35:Dissertation Abs Online 1861-2004/Aug
(c) 2004 ProQuest Info&Learning
File 348:EUROPEAN PATENTS 1978-2004/Sep W02
(c) 2004 European Patent Office
File 143:Biol. & Agric. Index 1983-2004/Aug
(c) 2004 The HW Wilson Co

Set	Items	Description

Cost is in DialUnits
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5/9/1 (Item 1 from file: 155)
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13588295 PMID: 9274045
Purification and characterization of a glutamic-acid-specific endopeptidase from Bacillus subtilis ATCC 6051; application to the recovery of bioactive peptides from fusion proteins by sequence-specific digestion.
Okamoto H; Fujiwara T; Nakamura E; Katoh T; Iwamoto H; Tsuzuki H
Shionogi Research Laboratories, Shionogi & Co. Ltd, Osaka, Japan.
Applied microbiology and biotechnology (GERMANY) Jul 1997, 48 (1) p27-33, ISSN 0175-7598 Journal Code: 8406612
Document type: Journal Article

Languages: ENGLISH
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Subfile: BIOTECHNOLOGY

Screening cultures of nonpathogenic microorganisms led us to a glutamic-acid-specific endopeptidase from Bacillus subtilis ATCC 6051, which we purified and named BSase. The nucleotide sequence encoding BSase, with a molecular mass of 23,894 Da, completely agreed with that of the mpr gene, which had been reported by Rufo Jr. and Sloma et al. to encode a metalloprotease [J Bacteriol (1990) 172: 1019-1023 and 1024-1029 respectively]. However, enzymatic characterization revealed it to have the catalytic triad of a serine protease and not the consensus sequence of a metalloprotease, and it was inhibited by diisopropylfluorophosphate. We therefore consider BSase (mpr) to be a serine protease. In the alignment of the acidic-amino-acid-specific proteases, the proteases from bacilli have a highly conserved histidine residue, which is most important in the **histidine triad** in the proteases from **streptomycetes** . Furthermore, Ca2+ was necessary for its activity and stability. BSase cleaved the C-terminal glutamic acid with high specificity and was very stable over a wide pH range. On the basis of these properties, we tried to retrieve a bioactive peptide from a fusion protein by sequence-specific digestion, and succeeded in obtaining the bioactive peptide. BSase was found to be very useful as a tool for selective cleavage.

Tags: Comparative Study

Descriptors: *Bacillus subtilis--enzymology--EN; *Glutamic Acid --metabolism--ME; *Serine Endopeptidases--metabolism--ME; Amino Acid Sequence; Bacillus subtilis--genetics--GE; Cloning, Molecular; Hydrogen-Ion Concentration; Metalloendopeptidases--genetics--GE; Metalloendopeptidases --metabolism--ME; Molecular Sequence Data; Peptide Fragments--metabolism --ME; Protease Inhibitors--pharmacology--PD; Recombinant Fusion Proteins --metabolism--ME; Sequence Analysis; Sequence Homology, Amino Acid; Serine Endopeptidases--genetics--GE; Serine Endopeptidases --isolation and purification--IP; Substrate Specificity

CAS Registry No.: 0 (Peptide Fragments); 0 (Protease Inhibitors); 0 (Recombinant Fusion Proteins); 56-86-0 (Glutamic Acid)

Enzyme No.: EC 3.4.21 (Serine Endopeptidases); EC 3.4.21.- (BSase); EC 3.4.24 (Metalloendopeptidases)

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5/9/2 (Item 2 from file: 155)
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A glutamic acid specific serine protease utilizes a novel histidine triad **in substrate binding.**

Nienaber V L; Breddam K; Birktoft J J

Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine, St. Louis, Missouri 63110.

Biochemistry (UNITED STATES) Nov 2 1993, 32 (43) p11469-75, ISSN 0006-2960 Journal Code: 0370623

Document type: Journal Article
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Proteases specific for cleavage after acidic residues have been implicated in several disease states, including epidermolysis, inflammation, and viral processing. A serine protease with specificity toward glutamic acid substrates (Glu-SGP) has been crystallized in the presence of a tetrapeptide ligand and its structure determined and refined to an R-factor of 17% at 2.0-A resolution. This structure provides an initial description of the design of proteolytic specificity for negatively charged residues. While the overall fold of Glu-SGP closely resembles that observed in the pancreatic-type serine proteases, stabilization of the

negatively charged substrate when bound to this protein appears to involve a more extensive part of the protease than previously observed. The substrate carboxylate is bound to a histidine side chain, His213, which provides the primary electrostatic compensation of the negative charge on the substrate, and to two serine hydroxyls, Ser192 and Ser216. Glu-SGP displays maximum activity at pH 8.3, and assuming normal pKa's, the glutamate side chain and His213 will be negatively charged and neutral, respectively, at this pH. In order for His213 to carry a positive charge at the optimal pH, its pKa will have to be raised by at least two units. An alternative mechanism for substrate charge compensation is suggested that involves a novel **histidine triad**, His213, His199, and His228, not observed in any other serine protease. The C-terminal alpha-helix, ubiquitous to all pancreatic-type proteases, is directly linked to this **histidine triad** and may also play a role in substrate stabilization.(ABSTRACT TRUNCATED AT 250 WORDS)

Descriptors: *Histidine--metabolism--ME; *Serine Endopeptidases --metabolism--ME; Amino Acid Sequence; Binding Sites; Crystallography, X-Ray; Glutamates--metabolism--ME; Glutamic Acid; Models, Molecular; Molecular Sequence Data; Protein Structure, Tertiary; Sequence Homology, Amino Acid; **Streptomyces** griseus--enzymology--EN; Substrate Specificity

Molecular Sequence Databank No.: PDB/1HPG

CAS Registry No.: 0 (Glutamates); 56-86-0 (Glutamic Acid); 71-00-1 (Histidine)

Enzyme No.: EC 3.4.21 (Serine Endopeptidases); EC 3.4.21.82 (glutamyl endopeptidase II)

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